

AMENDMENT TO THE CLAIMS

The following is a detailed listing of all claims that are, or were, in the Application.

1. (Withdrawn) An apparatus for processing description information of multimedia data, comprising:

a server 100 adding description information to multimedia; and

a terminal 200 transmitting/receiving multimedia data to/from the server 100, storing a user's usage history about the multimedia data, grasping a preference of a user with the stored usage history and providing the preference of the user to the server 100.

2. (Withdrawn) The apparatus of claim 1, wherein the server 100 further includes a description information descriptor 110 adding description information to the multimedia data.

3. (Withdrawn) The apparatus of claim 2, wherein the description information descriptor 110 classifies the description information added to the multimedia data into common characteristic information 300 commonly applicable to the multimedia data and inherent characteristic information 400 inherently applicable to the multimedia data, and the common characteristic information 300 and the inherent characteristic information 400 including subordinate characteristic information, respectively.

4. (Withdrawn) The apparatus of claim 2, wherein the description information descriptor 110 classifies the description information into common characteristic information 300 commonly applicable to the multimedia data and inherent characteristic information 400 inherently applicable to the multimedia data, a program ID 500 for distinguishing multimedia data having the same common characteristic information 300 from multimedia data having different common characteristic information and an inherent ID (Identification) 600 for identifying each of the multimedia data, and adds them to the multimedia data.

5. (Withdrawn) The apparatus of claim 4, wherein the common characteristic information includes not less than one of genre information, director information, leading actor and actress information and title information.

6. (Withdrawn) The apparatus of claim 4, wherein the inherent characteristic information includes not less than one item of a plot, an episode sequence in a series, a running time of multimedia data.

7. (Withdrawn) The apparatus of claim 2, wherein the description information descriptor 110 classifies description information into characteristic information, a program ID (Identification) 500 for distinguishing multimedia data having the same common characteristic information from multimedia data having different common characteristic information, and an inherent ID 600 for classifying each of the multimedia data.

8. (Withdrawn) The apparatus of claim 7, wherein the characteristic information includes type information 350 for classifying itself into common characteristic information 300 or inherent characteristic information 400.

9. (Withdrawn) The apparatus of claim 2, wherein the description information descriptor 110 classifies the description information into characteristic information, a program ID 500 for distinguishing multimedia data having the same common characteristic information 300 from multimedia data having different common characteristic information, an inherent ID for identifying each of the multimedia data and episode sequence information, and adds them to the multimedia data.

10. (Withdrawn) The apparatus of claim 9, wherein the characteristic information includes application group information 900 indicating applicable to other multimedia data

having the same program ID.

11. (Withdrawn) The apparatus of claim 10, wherein the application group information 900 includes first episode information 910 and last episode information 920 in order to describe a range in which each of the characteristic information can be commonly applied to the multimedia data having the same program ID.

12. (Withdrawn) The apparatus of claim 2, wherein the description information descriptor 110 adds an inherent ID 600 to the multimedia data in order to identify each of the characteristic information and each of the multimedia data.

13. (Withdrawn) The apparatus of claim 12, wherein each of the characteristic information further includes application group information 900 indicating applicable to other multimedia data having the same program ID.

14. (Withdrawn) The apparatus of claim 13, wherein the application group information 900 includes an application ID 930 in order to identify each characteristic information commonly applied to the multimedia data.

15. (Withdrawn) The apparatus of claim 1, comprising:
a display unit 220 displaying multimedia transmitted from the server 100;
a data analyzing unit 230 classifying the transmitted multimedia data and comparing program IDs of the multimedia data;
a memory unit 240 storing a user's usage history about the multimedia data; and
an I/O (Input / Output) interface unit 210 transmitting a user's preference to the server 100.

16. (Withdrawn) The apparatus of claim 15, wherein the data analyzing unit classifies the multimedia data transmitted from the server 100 into a common list and an inherent list.

17. (Withdrawn) The apparatus of claim 16, wherein the common list is stored in the memory unit 240.

18. (Withdrawn) The apparatus of claim 16, wherein the common list includes link information linking the common list itself to the inherent list.

19. (Withdrawn) The apparatus of claim 16, wherein the common list is stored in an additional memory unit.

20. (Withdrawn) The apparatus of claim 19, wherein the common list includes link information linking the common list stored in the additional memory unit to the inherent list.

21. (Withdrawn) A method for processing description information of multimedia data, comprising:

classifying description information into common characteristic information 300 commonly applicable to multimedia data and inherent characteristic information 400 inherently applicable to the multimedia data when the multimedia data is transmitted from a server to a terminal;

constructing a hierarchical information description format by adding each characteristic information of the multimedia data to a subordinate of the common characteristic information 300 and the inherent characteristic information 400, respectively; and

adding the hierarchical information description format to the multimedia data.

22. (Withdrawn) The method of claim 21, wherein the hierarchical information description format adding process further includes the step of:

adding a program ID 500 for distinguishing multimedia data having the same common characteristic information from multimedia data having different common characteristic information to the multimedia data.

23. (Withdrawn) The method of claim 22, wherein the program ID adding step further includes the sub-step of:

adding an inherent ID 600 for identifying each of the multimedia to the multimedia data.

24-79. (Canceled)

80. (Currently amended) A method implemented by [[an]] a terminal apparatus for processing information related to consumption of multimedia content in a digital broadcast system, the method comprising:

receiving one or more group descriptions at the terminal apparatus from a server about in the digital broadcast system, each of the one or more group description~~[[s]]~~ representing a respective group of broadcast programs and describing actual content program elements that are common in each broadcast program member of [[a]] the respective group, wherein each group description includes of multimedia objects and including a title for the respective group and a group identifier that is ~~a distinct element of the group description and uniquely identifies the respective group of broadcast programs multimedia objects;~~

storing the group identifier and at least a portion of each of the one or more group descriptions in the terminal apparatus;

receiving a first ~~content~~ program description and a first group description at the terminal apparatus from the server, the first ~~content~~ program description describing content in a first broadcast program multimedia-object and including (i) a title for the first broadcast program multimedia-object, (ii) a first object identifier that uniquely identifies the first broadcast program multimedia-object, and (iii) a first group reference that includes a first group identifier to identify a first group of broadcast programs multimedia-objects to which the first broadcast program multimedia-object belongs, wherein the first group description describes actual program content elements common in each broadcast program member of the first group ~~of multimedia-objects~~ and includes at least a title for the first group of ~~multimedia-objects~~;

at the terminal apparatus, comparing the first group identifier with the group identifier of each respective group of the one or more previously stored group descriptions if the first broadcast program multimedia-object is displayed on a display ~~terminal~~ of the terminal apparatus; and

if the first group identifier is different from the previously stored group identifiers, storing in the terminal apparatus the first group identifier and at least a portion of the first group description about the actual ~~content~~ program elements common in each ~~member~~ broadcast program of the first group ~~of multimedia-objects~~, and if the first group identifier is the same as one of the previously stored group identifiers, not storing the received first group description.

81. (Currently amended) The method of claim 80, further comprising:

in the terminal apparatus, storing a usage history that lists user actions and associates the first object identifier with each user action that is related to the first broadcast program multimedia-object.

82. (Currently amended) The method of claim 81, further comprising:

providing first link information in the usage history, wherein the first link information is configured to link the first group description to each user action that is related to the first broadcast program ~~multimedia object~~ and listed in the usage history.

83. (Previously presented) The method of claim 82, wherein the first link information includes the first group identifier.

84. (Currently amended) The method of claim 82, wherein storing the usage history includes storing the usage history with the first link information, ~~but without storing the received first group description if the first group identifier is the same as one of the previously stored group identifiers.~~

85-86. (Canceled)

87. (Currently amended) The method of claim 80, wherein the first group of broadcast programs ~~multimedia objects~~ represents a series of episodes, and wherein the first group reference indicates that the first broadcast program ~~multimedia object~~ represents an episode of the series.

88. (Currently amended) The method of claim 87, wherein the first group reference specifies an episode number for the first broadcast program ~~multimedia object~~ in the series of episodes.

89. (Currently amended) The method of claim 80, wherein the first ~~content~~ program description includes a hierarchical structure in which the first group reference is represented at the same hierarchical level as a container including programme~~content~~

description elements.

90. (Currently amended) The method of claim 89, wherein the ~~content~~ program description elements include an element describing a genre for the first broadcast program ~~multimedia object~~.

91. (Currently amended) The method of claim 89, wherein the ~~content~~ program description elements include an element specifying a director, an actor, or an actress for the first broadcast program ~~multimedia object~~.

92. (Currently amended) The method of claim 89, wherein the ~~content~~ program description elements include an element for a textual description of the content in the first broadcast program ~~multimedia object~~.

93. (Canceled)

94. (Currently amended) The method of claim 80, wherein the first group description specifies a genre for the first group of broadcast programs ~~multimedia objects~~.

95. (Currently amended) The method of claim 80, wherein the first group description specifies a director or one or more actors or actresses for the first group of broadcast programs ~~multimedia objects~~.

96. (Currently amended) A computer program product, embodied in a computer readable medium, for processing information related to consumption of multimedia content,

the computer program comprising instructions to cause data processing apparatus in a broadcast terminal of a digital broadcast system to perform operations comprising:

receiving one or more group descriptions at the broadcast terminal from a server ~~about in the digital broadcast system~~, each of ~~the one or more~~ group description[[s]] representing a respective group of broadcast programs and describing actual content program elements that are common in each broadcast program member of [[a]] the respective group, wherein each group description ~~includes of multimedia objects and including~~ a title for the respective group and a group identifier that is ~~a distinct element of the group description and uniquely identifies the respective group of broadcast programs multimedia objects;~~

storing the group identifier and at least a portion of each of the one or more group descriptions in the broadcast terminal;

receiving a first ~~content program~~ description and a first group description at the broadcast terminal from the server, the first ~~program content~~ description describing content in a first broadcast program multimedia object and including (i) a title for the first broadcast program multimedia object, (ii) a first object identifier that uniquely identifies the first broadcast program multimedia object, and (iii) a first group reference that includes a first group identifier to identify a first group of broadcast programs multimedia objects to which the first broadcast program multimedia object belongs, wherein the first group description describes actual ~~content program~~ elements common in each broadcast program member of the first group, ~~of multimedia objects~~ and includes at least a title for the first group ~~of multimedia objects;~~

at the broadcast terminal, comparing the first group identifier with the group identifier of each respective group of the one or more previously stored group descriptions if the first broadcast program multimedia object is displayed on a display ~~terminal~~ of the broadcast terminal apparatus; and

if the first group identifier is different from the previously stored group identifiers, storing in the broadcast terminal the first group identifier and at least a portion of the first group description about the actual ~~content program~~ elements common in each broadcast program member of the first group ~~of multimedia objects~~, and if the first group identifier is

the same as one of the previously stored group identifiers, not storing the received first group description.

97. (Currently amended) The product of claim 96, the computer program further comprises instructions to cause the data processing apparatus to perform operations comprising:

in the broadcast terminal, storing a usage history that lists user actions and associates the first object identifier with each user action that is related to the first broadcast program multimedia object.

98. (Currently amended) The product of claim 97, wherein the computer program further comprises instructions to cause the data processing apparatus to perform operations comprising:

providing first link information in the usage history, wherein the first link information is configured to link the first group description to each user action that is related to the first broadcast program multimedia object and listed in the usage history.

99. (Currently amended) The product of claim 98, wherein storing the usage history includes storing the usage history with the first link information, ~~but without storing the received first group description if the first group identifier is the same as one of the previously stored group identifiers.~~

100-101. (Canceled)

102. (Currently amended) The product of claim 96, wherein the first group of broadcast programs multimedia objects represents a series of episodes, and wherein the first group reference indicates that the first broadcast program multimedia object represents an

episode of the series.

103. (Currently amended) The product of claim 102, wherein the first group reference specifies an episode number for the first broadcast program ~~multimedia object~~ in the series of episodes.

104. (Currently amended) The product of claim 96, wherein the first program ~~content~~ description includes a hierarchical structure in which the first group reference is represented at the same hierarchical level as a container including ~~content~~ program description elements.

105. (Currently amended) The product of claim 104, wherein the program ~~content~~ description elements include an element describing a genre for the first broadcast program ~~multimedia object~~.

106. (Currently amended) The product of claim 104, wherein the program ~~content~~ description elements include an element specifying a director, an actor, or an actress for the first broadcast program ~~multimedia object~~.

107. (Currently amended) The product of claim 104, wherein the program ~~content~~ description elements include an element for a textual description of the content in the first broadcast program ~~multimedia object~~.

108. (Canceled)

109. (Currently amended) The product of claim 96, wherein the first group

description specifies a genre for the first group of broadcast programs ~~multimedia objects~~.

110. (Currently amended) The product of claim 96, wherein the first group description specifies a director or one or more actors or actresses for the first group of broadcast programs ~~multimedia objects~~.

111. (Currently amended) A broadcast terminal in a digital broadcast system for processing information related to consumption of multimedia content, the ~~system~~ broadcast terminal comprising:

a display ~~terminal~~;

a memory unit; and

data processing apparatus configured to:

receive one or more group descriptions from a server ~~about~~ in the digital broadcast system, each of the one or more group description[[s]] representing a respective group of broadcast programs and describing actual content program elements that are common in each broadcast program member of [[a]] the respective group, wherein each group description includes ~~of multimedia objects and including~~ a title for the respective group and a group identifier that ~~is a distinct element of the group description and~~ uniquely identifies the respective group of broadcast programs ~~multimedia objects~~;

store the group identifier and at least a portion of each of the one or more group descriptions in the memory unit;

receive a first ~~content~~ program description and a first group description from the server, the first ~~content~~ program description describing content in a first broadcast program ~~multimedia object~~ and including (i) a title for the first broadcast program ~~multimedia object~~, (ii) a first object identifier that uniquely identifies the first broadcast program ~~multimedia object~~, and (iii) a first group reference that includes a first group identifier to identify a first group of broadcast programs ~~multimedia objects~~ to which the first broadcast program ~~multimedia object~~ belongs, wherein the first group description describes

actual ~~content~~ program elements common in each broadcast program member of the first group, ~~of multimedia objects~~ and includes at least a title for the first group ~~of multimedia objects~~;

compare the first group identifier with the group identifier of each respective group of the one or more previously stored group descriptions if the first broadcast program multimedia object is displayed on the display terminal; and

if the first group identifier is different from the previously stored group identifiers, store the first group identifier and at least a portion of the first group description about ~~content~~ program elements common in each broadcast program member of the first group ~~of multimedia objects~~ in the memory unit, and if the first group identifier is the same as one of the previously stored group identifiers, not to store the received first group description.

112. (Currently amended) The broadcast terminal system of claim 111, wherein the data processing apparatus is further configured to:

store a usage history in the memory unit, the usage history listing user actions and associating the first object identifier with each user action that is related to the first broadcast program multimedia object.

113. (Currently amended) The broadcast terminal system of claim 112, wherein the data processing apparatus is further configured to:

provide first link information in the usage history, wherein the first link information is configured to link the first group description to each user action that is related to the first broadcast program multimedia object and listed in the usage history.

114. (Currently amended) The broadcast terminal system of claim 113, wherein storing the usage history includes storing the usage history with the first link information, ~~but~~

~~without storing the received first group description if the first group identifier is the same as one of the previously stored group identifiers.~~

115-116. (Canceled)

117. (Currently amended) The broadcast terminal system of claim 111, wherein the first group of broadcast programs ~~multimedia objects~~ represents a series of episodes, and wherein the first group reference indicates that the first broadcast program ~~multimedia object~~ represents an episode of the series.

118. (Currently amended) The broadcast terminal system of claim 117, wherein the first group reference specifies an episode number for the first broadcast program ~~multimedia object~~ in the series of episodes.

119. (Currently amended) The broadcast terminal system of claim 111, wherein the first ~~content~~ program description includes a hierarchical structure in which the first group reference is represented at the same hierarchical level as a container including ~~content~~ program description elements.

120. (Currently amended) The broadcast terminal system of claim 119, wherein the ~~content~~ program description elements include an element describing a genre for the first broadcast program ~~multimedia object~~.

121. (Currently amended) The broadcast terminal system of claim 119, wherein the ~~content~~ program description elements include an element specifying a director, an actor, or an actress for the first broadcast program ~~multimedia object~~.

122. (Currently amended) The broadcast terminal~~system~~ of claim 119, wherein the ~~content program~~ description elements include an element for a textual description of the content in the first broadcast program ~~multimedia object~~.

123. (Canceled)

124. (Currently amended) The broadcast terminal ~~system~~ of claim 111, wherein the first group description specifies a genre for the first group of broadcast programs ~~multimedia objects~~.

125. (Currently amended) The broadcast terminal ~~system~~ of claim 111, wherein the first group description specifies a director or one or more actors or actresses for the first group of broadcast programs ~~multimedia objects~~.

126. (New) A method implemented by a terminal apparatus for processing information related to consumption of multimedia content in a digital broadcast system, the method comprising:

receiving one or more group descriptions at the terminal apparatus from a server in the digital broadcast system, each group description representing a respective group of broadcast programs and describing actual program elements that are common in each broadcast program of the respective group, wherein each group description includes a group identifier that uniquely identifies the respective group of broadcast programs;

storing the group identifier and at least a portion of each of the one or more group descriptions in the terminal apparatus;

receiving a first program description and a first group description at the terminal apparatus from the server, the first program description describing content in a first broadcast program and including (i) a first object identifier that uniquely identifies the first broadcast

program and (ii) a first group reference that includes a first group identifier to identify a first group of broadcast programs to which the first broadcast program belongs, wherein the first group description describes actual program elements common in each broadcast program of the first group;

at the terminal apparatus, comparing the first group identifier with the group identifier of each respective group of the one or more previously stored group descriptions; and

if the first group identifier corresponds to one of the previously stored group identifiers, linking the first broadcast program to the corresponding one of the previously stored group descriptions without storing the received first group description.

127. (New) The method of claim 126, further comprising:

storing in the terminal apparatus the first group identifier and at least a portion of the first group description about the actual program elements common in each broadcast program of the first group if the first group identifier is different from the previously stored group identifiers.

128. (New) A computer program product, embodied in a computer readable medium, for processing information related to consumption of multimedia content, the computer program comprising instructions to cause data processing apparatus in a broadcast terminal of a digital broadcast system to perform operations comprising:

receiving one or more group descriptions at the broadcast terminal from a server in the digital broadcast system, each group description representing a respective group of broadcast programs and describing actual program elements that are common in each broadcast program of the respective group, wherein each group description includes a group identifier that uniquely identifies the respective group of broadcast programs;

storing the group identifier and at least a portion of each of the one or more group descriptions in the broadcast terminal;

receiving a first program description and a first group description at the broadcast terminal from the server, the first program description describing content in a first broadcast program and including (i) a first object identifier that uniquely identifies the first broadcast program and (ii) a first group reference that includes a first group identifier to identify a first group of broadcast programs to which the first broadcast program belongs, wherein the first group description describes actual program elements common in each broadcast program of the first group;

at the broadcast terminal, comparing the first group identifier with the group identifier of each respective group of the one or more previously stored group descriptions; and

if the first group identifier corresponds to one of the previously stored group identifiers, linking the first broadcast program to the corresponding one of the previously stored group descriptions without storing the received first group description.

129. (New) The product of claim 128, further comprising instructions to cause the data processing apparatus to perform operations comprising:

storing in the terminal apparatus the first group identifier and at least a portion of the first group description about the actual program elements common in each broadcast program of the first group if the first group identifier is different from the previously stored group identifiers.

130. (New) A broadcast terminal in a digital broadcast system for processing information related to consumption of multimedia content, the broadcast terminal comprising:

a display;
a memory unit; and
data processing apparatus configured to:

receive one or more group descriptions from a server in the digital broadcast system, each group description representing a respective group of broadcast programs and describing actual program elements that are common in each broadcast program of the respective group, wherein each group description includes a group identifier that uniquely identifies the respective group of broadcast programs;

store the group identifier and at least a portion of each of the one or more group descriptions in the memory unit;

receive a first program description and a first group description from the server, the first program description describing content in a first broadcast program and including (i) a first object identifier that uniquely identifies the first broadcast program and (ii) a first group reference that includes a first group identifier to identify a first group of broadcast programs to which the first broadcast program belongs, wherein the first group description describes actual program elements common in each broadcast program of the first group;

compare the first group identifier with the group identifier of each respective group of the one or more previously stored group descriptions; and

if the first group identifier corresponds to one of the previously stored group identifiers, link the first broadcast program to the corresponding one of the previously stored group descriptions without storing the received first group description.

131. (New) The broadcast terminal of claim 126, wherein the data processing apparatus is further configured to:

store in the memory unit the first group identifier and at least a portion of the first group description about the actual program elements common in each broadcast program of the first group if the first group identifier is different from the previously stored group identifiers.